STCG SUBCON SUBGROUP MEETING MINUTES

May 27, 1998

Review Minutes from Last Meeting (Facilitator)

Minutes from the April 2, 1998 meeting were reviewed, and no changes were requested. The minutes will stand as written.

SCFA Mid-Year Review (Jim Hanson)

Jim Hanson and David Shafer attended the SCFA Mid-Year Review in Augusta on April 28-30. The proposed SCFA budget for FY 1999 by product line (with the total RL share indicated) is as follows:

DNAPLs	$3.526M	
Metals and Radionuclides	$4.160M	
RL38SS42 - In Situ Chemical Treatment by Gaseous Reduction		$450K
RL39SS41 - In Situ Soil Flushing		$500K
RL38SS40 - IN Situ Redox Manipulation		$100K
Total RL		$1050K
Source Term Containment/Reduction	$1.950M	
RL39SS21 - Long-Term Surface Barriers		$400K
Total RL		$400K
Management	$2.675M	
Baseline Program	**$12.311M**	
ASTD	$9.055M	
WETO	$7.250M	
Technical Support	$2.200M	
Total Program	**$30.816M**	
CMST	$3.600M	
Industry Program	$3.000M	
University Program	$2.900M	
Science Program	$11.760M	
Total Crosscut Programs	**$21.260M**	

Hanford is waiting for the DNAPL technologies to mature. We don=t want to test them here because our groundwater is at 250 feet.

In Situ Redox Manipulation (ISRM) is one of SCFA=s key projects. They are funding us $100K for FY 1999, to be supplemented by ASTD. EM-40 is committed to 50% of the cost of ISRM, with $600K budgeted for FY 1999 site characterization work.

Currently EM-40 and EM-50 are supporting the long-term barrier performance work. The Site is trying to get EM-30 involved, too. It was suggested that we request a presentation on the software used to evaluate barrier designs and applications.

Subcon has a total of $9M of ASTD funds. Of that, $7.2M is already mortgaged to ongoing work; only $1.8M is available for new starts this year.

A new SCFA User Advisory Group is being formed, using the TFA model. Rich Holten is the Hanford representative, and Jim Hanson is his back-up. EM-40 and EM-30 users will be involved in SCFA funding allocations in the future (i.e., how to prioritize the work scope), starting with FY 2000 planning.

NAS Visit (Jim Hanson)

A NAS Committee on Technologies for Cleanup of Subsurface Contaminants in the DOE Weapons Complex has been formed to do preliminary evaluations of remediation technologies for metals, radionuclides, and DNAPLs. They have requested presentations from EPA and DOE. DOE-RL provided a tour of the 100-D, 100-H, 100-N, and 200-ZP Areas and ERDF on May 15, 1998. They saw the ISRM demonstration, the chromium pump-and-treats, and the N-Area cribs. Approximately 14 people went on the tour.

Improvements to Subgroup Performance (Dave Biancosino)

Since Dave Biancosino was not able to attend this meeting, this topic was postponed until the next meeting.

Vadose Zone Technology Update (Jim Hanson)

An Integrated Groundwater/Vadose Zone Project has been developed at Hanford to try to integrate the Astovepipes@ at the Site. Jim distributed copies of the April 1998 DOE-RL report *Management and Integration of Hanford Site Groundwater and Vadose Zone Activities* (referred to as the Plan for a Plan) . The Plan for the Path Forward is due at the end of September. They are currently identifying gaps in our understanding.

The points of contact for the Integrated Groundwater/Vadose Zone Project are as follows:

Mike Graham, BHI Project Manager
Tom Wintczak, BHI Lead
Janice Williams, FDH Lead
Tom Page, PNNL Lead
Rich Holten, DOE-RL/AME Project Manager
Jim Hanson, DOE-RL/STP
David Shafer, TWRS
Mike Thompson, ER
David Olson
Doug Hildebrand
Marv Furman
Arlene Tortoso
Bryan Foley

Dib Goswami mentioned that meetings of the regulators, stakeholders, and Tribes are held every Monday at 1:00 p.m. They are currently trying to define Ameaningful involvement@ in this effort.

Barbara Harper asked about the scope of the integrated project. Does it include the Columbia River all the way to Portland, or just on this Site?

Arlene Tortoso asked if groundwater/vadose zone technology is under TFA or SCFA. TFA had the responsibility in the past, since it was such an important issue and TFA had more funds to allocate to it than SCFA did. It appears to be a joint responsibility now.

Jim discussed a recent SRS technology demonstration of the Cone Permeameter, which can obtain rapid and accurate in situ air permeability and saturated hydraulic conductivity measurements with a cone penetrometer. He wants to do a cold demonstration with the cone penetrometer this fiscal year at Hanford. The resulting data will help us with our groundwater and vadose zone modeling. Copies of the technology brochure were distributed to the Subgroup.

Jim also distributed copies of David Shafer=s write-up of ongoing and proposed science and technology work for TWRS vadose zone issues.

ASTD Proposals (John April)

In Situ Redox Manipulation for Groundwater Remediation - 100-D Area

John Fruchter presented this ASTD proposal for a two-year project to deploy ISRM technology at one of the 100-D Area chromium plumes. Five dithionite injection wells have already been drilled for treatability tests. The final two injection wells will be completed in June 1998. EM-40 plans to install 12 more characterization wells in FY 1999.

Plans are to expand the existing barrier by an additional 500 feet in FY 1999 and FY 2000. The total project cost will be $3M over a two-year period, half paid by EM-40 and half paid by EM-50. The benefit is expected to be a 60% cost savings over pump-and-treat technology over a 10-year period (about $7M).

Enhanced Site Characterization System

Christopher Murray presented this ASTD proposal, which describes a buried waste mapping system. Past excavations at buried waste sites found unexpected wastes, which led to costly delays. In fact, the ER Program spent $200K in just one weekend!

The new technology will:

- delineate buried waste boundaries
- locate/identify Ahot spots@ (e.g., pyrophorics)
- statistically integrate geophysical data.

The proposal is to deploy this technology at the 618-4 burial ground to characterize the unexcavated portions (where the uranium barrels were found earlier). This proposal addresses accelerated cleanup, closure, and two STCG technology needs. Cost avoidance benefits are expected to accrue from this work if it is funded. Half the funding support will come from EM-40.

In the past, it was felt that characterization of burial grounds was futile, since they are so heterogeneous. The workers just characterized the dig face as they went. EM-40 will have to characterize the burial grounds anyway, but this proposal would provide enhancement for that activity, paid for by EM-50. The project hopes to come up with protocols of what geophysical suite of tools must be used and fed into the integrating software.

John April agreed to send the draft ASTD proposals out to the Subgroup members by noon on June 8th for their review. Comments were due to John by close of business on June 10th. Dennis Faulk told DOE and BHI to be sure to notify their regulators as early as possible in the future. The RFP was much too late this year.

Fred Serier asked if anyone had any issues or concerns that would prevent the ASTD proposals from going forward. No one did, but they all wanted to review the final proposals. No one expressed any barriers to either of the ASTD proposals being submitted to SCFA.

S&T Needs Process Schedule (John April)

John distributed the S&T needs process schedule. The high-level draft technology needs statements will be presented at the June Subgroup meeting. Subgroup members will have a month to review them. Comment resolution and finalization of the needs will take place between

July 29 and August 14. The technology needs will be reviewed and endorsed by the STCG Management Council in August and September.

BHI staff will be working with PNNL staff to review last year=s science needs and modify them as necessary. The science needs will be presented to the Subgroup in July for review.

BHI Process for Technology Applications (John April)

Due to time constraints, this topic was postponed until the next meeting.

Science and Technology Roadmapping Process (Marilyn Quadrel)

Marilyn summarized the presentation she made to Secretary Moniz on April 8. His view is that science and technology (S&T) roadmaps can: 1) focus the collective attention of experts on a set of problems/issues and how to overcome them, and 2) focus on uncertainty. The technical objective of this roadmapping exercise is to provide a sound S&T basis for cleanup of the groundwater, the vadose zone, and the river. The challenge is to generate a credible system model.

A roadmap is a plan to resolve uncertainties. These roadmaps will articulate the S&T investments needed to support our understanding of the groundwater, the vadose zone, and related Site decisions. The project will seek consensus on:

- what are the key uncertainties
- what=s needed to resolve them
- why it=s needed
- when it=s needed.

By June, they hope to define the conceptual model of the Groundwater/Vadose Zone Project. By July or August, they hope to understand the gaps in the required information. By September, they hope to develop S&T roadmaps which will focus on applied science (understanding).

The Groundwater/Vadose Zone Project is on the critical path for TWRS SST sluicing. The issue is how much can the vadose zone buffer potential leaks to protect the groundwater and the river.

Attendees

John April (CH2M Hill)
Linda Fassbender (PNNL)
Dennis Faulk (EPA)
John Fruchter (PNNL)
Dib Goswami (Ecology)
Jim Hanson (DOE-RL/STP)

Barbara Harper (Yakama Indian Nation)
Doug Huston (Oregon Office of Energy)
Wayne Martin (PNNL)
John Murphy (DOE-RL/AME)
Christopher Murray (PNNL)
Marilyn Quadrel (PNNL)
Fred Serier (DOE-RL/AME)
John Stanfill (Nez Perce Tribe)
Arlene Tortoso (DOE-RL/AME)

Next Meeting

The next Subgroup meeting was tentatively scheduled for June 24, 1998. It was subsequently changed to Wednesday, July 1 at 8:30 a.m. in Room 1B-45 of the Bechtel Building.